Montana Fish, Wildlife & Parks

1420 East Sixth Avenue
P.O. Box 200701
Helena, MT 59620-0701
August 23, 1996

Governor's Office, Attn: Glenn Marx
Environmental Quality Council
Dept. of Environmental Quality, Metcalf Building, POB 200901, Helena, MT 59620-0901
Montana Fish, Wildlife & Parks
Fisheries Division
Endangered Species Coordinator
Great Falls Offices
Montana Historical Society, State Historic Preservation Office, POB 201202, Helena, MT 59620-1202
Montana State Library, 1515 East Sixth Avenue, POB 201800, Helena, MT 59620-1800
MT Environmental Information Center, POB 1184, Helena, MT 59624
MT Audubon Council, POB 595, Helena, MT 59624
Teton Conservation District
Environmental Protection Agency, Federal Building, Helena, MT 59601
Army Corps of Engineers, 301 South Park Avenue, Helena, MT 59601
U.S. Fish and Wildlife Service, 100 North Park Avenue, Helena, MT 59601

Dear Ladies and Gentlemen:

The enclosed Environmental Assessment (EA) is submitted for your consideration. It was prepared for the proposed Future Fisheries Improvement project on the Teton River. This project consists of protecting the streambank with natural material revetments. The purpose of this work is to prevent the Teton River from eroding into the McDonald Creek channel.

Questions and comments will be accepted until 5:00 p.m., September 23, 1996. If you have questions, feel free to contact me at (406) 444-2432. All comments should be sent to the undersigned.

Thank you for your interest.

Sincerely,

Bruce J. Rehwinkel
Habitat Protection Bureau
Fisheries Division

ENVIRONMENTAL ASSESSMENT

IMPLEMENTATION OF A FUTURE FISHERIES PROJECT ON THE TETON RIVER

Prepared by
Montana Fish, Wildlife & Parks
August 23, 1996

GENERAL PURPOSE

The 1995 Montana Legislature enacted statute 87-1-272 & 273, MCA which directs Montana Fish, Wildlife & Parks (FWP) to restore and improve degraded wild fisheries. The legislation established a one-time funding account to ensure that this function would be accomplished. The Teton River streambank stabilization project described herein is one of 19 applications made during the second funding cycle which ended July 1, 1996.

BACKGROUND

The Teton River above Choteau has numerous irrigation diversions. Most of these diversions involve annual maintenance which usually includes rebuilding of gravel dikes, realigning channels, or excavating gravel deposits that impede streamflows adjacent to irrigation canal headgates. Additionally, several of these diversions involve exclusively high-water diversion. These high-water diversions generally create massive deposition of bedload gravels because the stream is losing the energy of its total force at that time.

Bynum Diversion is exactly this situation. Huge amounts of gravel have been deposited over time adjacent to the diversion. Periodic large-scale excavations have been used to resolve the diversion problems - on the short-term. What has resulted is a very unstable channel that is extremely close to another tributary - McDonald Creek. If the channel migration continues unchecked, the flow of the entire Teton River will pass into the smaller stream. This will result in major erosion of that channel, as it attempts to accommodate the new higher flow regime. Additionally, another irrigation diversion along the present Teton River course (below the Bynum Diversion) will be left without water.

I. DESCRIPTION OF THE PROPOSED ACTION

The Teton River streambanks will be stabilized using trees, root wads, and rock to protect approximately 660 feet of channel from migrating any closer to the McDonald Creek channel. The revetment of this channel with natural materials will follow the general principles of described by David Rosgen. The intent of this approach is to create a defined channel that will continue to provide for the passing of these large bedloads of gravel and maintain a functioning channel that does not migrate laterally.

A. Location of Project

The channel stabilization project is located within Township 25 North, Range 7 West, Section 34 of Teton County. The 660 feet of erosion control work will be done on The Nature Conservancy ranch property.

B. Project Benefits

The primary species to benefit from this work will be the rainbow, brook and brown trout of the Teton River; brook trout of McDonald Creek; and self-sustaining populations of walleye and yellow perch in Bynum Reservoir.

Fishing pressure on this reach of the Teton River was estimated at 1413 angler days per year (FWP, 1995). This pressure is exclusively resident anglers and has markedly increased in recent years. Projects like the one proposed should aid in improving the fishery and accommodating expanded angler use.

II. IMPACTS TO THE PROPOSED ACTION

Please review the attached checklist. The proposed project will stabilize the channel of the Teton River and prevent the capture of the Teton flows by the McDonald Creek channel. The project is intended to prevent the large scale loss of fish habitat by this catastrophic event.

A. Impacts to the Physical Environment

1. Terrestrial & Aquatic Life and Habitats

Habitat for riparian dependent wildlife will be restored through the efforts of this project. The cover component of this habitat - once restored - will result in a more attractive and productive wildlife area.

Fishery benefits of this project include the enhancement of an eroded stream channel, reduction of sediment contribution from these banks and the diversification of the fish habitat. Stream cover and shading should be increased by this project.

2. Water quality, quantity and distribution

Depending on the situation at the time of construction, much of the bank reshaping and revetment may be accomplished completely in under dry conditions. However, if fall stream flows increase, part of this work will be done in the water.

If the work is done under wet conditions, some short-term increases in turbidity will occur during project construction. A short-term exemption from water quality standards may be necessary. Whatever conditions the Water Quality Division places on the permit, will be followed.
In the long-term, measures to stabilize and minimize erosion will improve water quality. Streamflow will not be changed by this project.

3. Geology and Soil Quality, Turbidity and Moisture

No effects on the area's geology are expected to occur above the active high-water mark. Once the vegetation is established, it should act as a "filter mat" and help hold the soil on upland areas.

The effects of this project on the geology below the high-water mark are to curtail sediment contribution from the upland locations into the riverine situation. This reduction in sediment contribution should allow the river to use its energy to transport sediment that already exists within the channel. Ultimately, the channel should experience a reduction of fine sediment - assuming nothing else in the system changes.

4. Vegetation Cover, Quantity and Quality

This project will help restore the riparian plant community to a more natural condition within this 660-foot reach. The process of vegetative recovery will require many years, but should progress in a predictable fashion as long as the bank protection does not fail or grazing practices aren't changed.

5. Aesthetics

The aesthetics of the riparian area in this vicinity are quite degraded The general appearance of the stream corridor will be much improved once the bank erosion is corrected.

9. Historical and Archaeological Sites

The proposed activity will be confined to those areas of the stream channel that have been disturbed by fluvial process of the stream and/or the process of grazing livestock.

Since the entire area is located on privately owned property and the changes occurred as a result of natural process, this action does not appear to meet the definition of an "undertaking" as described in the state antiquities act.

B. Impacts to the Human Environment

7. Access to & quality of recreational activities

The public will realize increased wild trout populations in this reach of the Teton River. Access to

the site can be secured through a simple request of permission from the landowner.

III. DISCUSSION AND EVALUATION OF REASONABLE ALTERNATIVES

A. The "No Action" Alternative

If this project is not completed, the following consequences are likely to result:

- fish habitat will remain very homogeneous and fish populations will remain low,
- the riparian plant community will not recover beyond the present condition,
- angling on the Teton River will probably not increase over present levels,
- erosion of the streambank will continue and the Teton River may capture the McDonald Creek channel, and;
- sediment contribution to this system will likely increase.

B. The Proposed Alternative

The proposed project will result in the following:

- Fish populations should improve as a result of a more varied habitat base,
- the riparian plant community will further recover from its present degraded condition,
- angling on the Teton River should increase and harvest could improve,
- erosion of the streambank will cease and the threat of a McDonald Creek capture should become minimal, and;
- sediment contribution from this source will be reduced.

IV. ENVIRONMENTAL ASSESSMENT CONCLUSIONS SECTION

A. Is an EIS required? No

This review has clearly demonstrated that the impacts associated with this project are not significant. The net result of the proposed action is a return to a more productive situation.

B. Describe the level of public involvement.

The project was reviewed and supported by the public review panel of the Future Fisheries Improvement program at the July meeting. Legal Notices were published in the Helena Independent Record inviting the public to this function. Additionally, copies of this proposal were sent to all Fish, Wildlife and Parks Commissioners for review.

This Environmental Assessment is being distributed to all individuals and groups listed on the cover letter.

Lastly, the Teton River erosion control project was approved by the Commission at their August 8, 1996 meeting.

C. Duration of comment period?

Public comment will be accepted through 5:00 p.m. on September 23, 1996.

D. Name, Title, address and phone number of the person responsible for preparing the Environmental Assessment:

Bruce J. Rehwinkel
Habitat Bureau
Fisheries Division
1420 East Sixth Avenue
P.O. Box 200701
Helena, MT 59620-0701

(406) 444-2432

MONTANA FISH, WILDLIFE AND PARKS
1420 E 6th Ave, PO BOX 200701, Helena, MT 59620-0701
(406) 444-2535

ENVIRONMENTAL ASSESSMENT

Project Title Teton River Streambank Protection Project

Division/Bureau Fisheries Division, Future Fisheries Program

Description of Project This project consists of protecting a Teton River streambank in the area of the Bynum Diversion. This project is proposed to prevent the Teton River from eroding into McDonald Creek. The materials to be used as bank revetments are root wads, logs, boulders and transplanted vegetation.

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ATTACHED
1. Terrestrial & aquatic life and habitats			X			X
2. Water quality, quantity & distribution			X			X
3. Geology & soil quality, stability & moisture			X			X
4. Vegetation cover, quantity & quality			X			X
5. Aesthetics			X			X
6. Air quality				X		
7. Unique, endangered, fragile, or limited environmental resources				X		
8. Demands on environmental resources of land, water, air & energy				X		
9. Historical & archaeological sites			X			X

POTENTIAL IMPACTS ON HUMAN ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ATTACHED
1. Social structures & mores				X		
2. Cultural uniqueness & diversity				X		
3. Local & state tax base & tax revenue				X		
4. Agricultural or industrial production				X		
5. Human health				X		
6. Quantity & distribution of community & personal income				X		
7. Access to & quality of recreational and wilderness activities			X			X
8. Quantity & distribution of employment				X		
9. Distribution & density of population & housing				X		
10. Demands for government services				X		
11. Industrial & commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		
14. Transportation networks & traffic flows				X		

Other groups or agencies contacted or which may have overlapping jurisdiction EPA, U.S. Fish & Wildlife Service, Corps of Engineers, Conservation District

Individuals or groups contributing to this EA None

Recommendation concerning preparation of EIS No EIS Required

EA prepared by : Bruce Rehwinkel Date: August 23, 1996